SCRAPIE

JUNE 2006

Introduction: Scrapie is a fatal, degenerative disease primarily affecting the nervous system of sheep and sometimes goats. It belongs to a group of diseases known as the spongiform encephalopathies. Similar diseases affect cattle, deer, elk, mink, cats and people. All of these diseases cause sponge-like spaces in the brain of the affected animal, affecting the brain's ability to control body functions and eventually resulting in death.

Cause: The exact cause of scrapie and other spongiform encephalopathies is unknown. However, most people believe that the infective agent is a protein called a prion. Although scrapie is an infectious disease, genetic variations among sheep are important as to whether they become infected and how quickly signs appear. Scrapie is more common in certain breeds of sheep, mainly because of exposure to infected animals. No breed is completely resistant and the disease has been diagnosed in many different breeds and crossbreeds.

Spread: The agent causing scrapie is most commonly spread from dam to offspring at birth. The agent may also spread to other newborns that are born around the same time that the scrapie-affected ewe lambed. Transmission is believed to occur through contact with the birth fluids and placenta of the affected animal. Scrapie does not spread naturally to cattle, and there is no evidence that scrapie poses a risk to human health.

Signs: It may take 2-5 years before the animal shows signs of disease. Infected sheep do not all show the same signs. Weight loss despite a healthy appetite and good feed is often one of the first signs of scrapie. Skin lesions and wool loss are also frequently observed. Sheep will scrape themselves against objects (hence the name scrapie) damaging their skin and wool. Affected animals may grind their teeth, tremble or show muscle spasms, bite at their legs, display gait abnormalities, and eventually stagger or stumble when they walk. The clinical signs of scrapie always get progressively worse. Death usually occurs within 1-6 months after the first signs of scrapie appear.

Diagnosis: When an owner notices any of the signs of scrapie they should contact a veterinarian. Many diseases cause similar signs: mange and ringworm can mimic the skin lesions; chemical and plant poisons, nutritional deficiencies, trauma, and parasitism may cause incoordination and staggering; rabies causes a fatal neurologic disease; many conditions including parasitism, malnutrition, "broken mouth" or missing teeth, and caseous lymphadenitis cause chronic weight loss. The final diagnosis of scrapie is made after the animal dies and a section of the brain is examined. A test using lymphoid tissue from the inner eyelid can also determine if a live animal has scrapie.

Control: Maintaining a closed ewe flock is the best method to avoid introducing scrapie into a flock. Using rams that are genetically resistant, RR at codon one hundred and seventy-one, not only produces more resistant offspring, but also may prevent transmission from an infected dam to susceptible animals. Producers can also voluntarily participate in the **Scrapie Flock Certification Program -** a cooperative effort among producers, allied industry representatives, accredited veterinarians, and State and Federal animal health officials. Participating flocks can become Certified Scrapie Free after meeting all requirements of the program for five years.

Eradication: All 50 states participate in the **Scrapie Eradication Program.** This program includes the identification of all sheep and goats changing ownership (so that animals can be traced), testing samples from sheep at slaughter facilities to find infected flocks, and providing effective procedures for producers to clean up infected flocks.

CDFA Animal Health Branch Offices	
Sacramento (HQ)	916-654-1447
Modesto	209-491-9350
Ontario	909-947-4462
Redding	530-225-2140
Tulare	559-685-3500
USDA/APHIS/VS 916-854-3900 or 877-741-3690	

Official ear tags can be obtained through USDA at 916-854-3900 or **toll free 1-866-USDA-TAG (1-866-873-2824).**